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SOCIETY OF ARTS.

FRIDAY, AUGUST 19th, 1853.

NOTICE TO INSTITUTIONS.

THE Council have much pleasure in announcing, that the Committee of Privy Council on Education, and the General Board of Health, have extended their former grants of Reports, &c., to those Institutions which have recently joined the Union.

They have also to announce, that the Very Reverend the Dean of Hereford, has placed at their disposal fifty copies of each of the following works: "Suggestive Hints towards improved Secular Instruction," and "An Improved and Self-paying System of National Education;" also, that John Bright, Esq., M.P., has likewise placed at their disposal forty copies of "Welford on the Game Laws," for distribution to the Institutions in Union. As the number of these works is less than the number of Institutions in Union, it is requested that special applications may be made, which will be registered in the order of their receipt, and the books sent out in the next parcel.

The following Institutions have been taken into Union since the last announcement:

285. Berkhamstead, Mechanics' Institution.
286. Brighton, London and Brighton and South-Coast Railway Literary and Scientific Institution.
287. Colchester, Mechanics' Institution.

AMERICAN REPORT OF THE GREAT EXHIBITION OF 1851.

THE Commissioner of Patents for the United States of America prints, in his Annual Reports to Congress, the report of Mr. Riddle, the American Commissioner for the Exhibition of 1851. The Report is too long to give entire in the Journal, but as the members of the Society, within whose walls the Exhibition had its birth, will naturally feel a curiosity to know what their Transatlantic brethren think of the Hyde Park display, some account of the Report will not be unacceptable. The Report takes each class separately, touching on the more prominent objects in it, entering into details with respect to manufactures, sources of supply, &c., which are unnecessary for the present purpose to touch upon here; but the opinions, observations, and conclusions arrived at, and comparisons made, if not always accurate, or in accordance with the notions of this side of the water, will at least be read with interest.

After speaking of the vast importance of exports of cotton to England, exceeding annually 470,000,000 lbs.—

"An export constantly increasing, and every year making Europe more dependent on us as producers, and we more dependent upon Europe as our great market;" and entering into an examination of the samples from the United States, embracing specimens from five States, the report characterizes them as "first-rate specimens;" not "museum samples, but just what was the article raised on the plantation. * * * * * When looking

over the other samples of cotton in the Exhibition, one impression never left the mind,—and that was, that the culture of all cottons other than ours is slovenly conducted." The reporter, after going into numerous details, concludes this branch of the subject by saying, "From what I have said my convictions must be apparent to the reader, that the cottons raised in the East can never successfully rival those which are the great staple of the South. The reasons for this are undoubtedly to be found in the great differences of the soil of the two parts of the world. To the effects produced by climate, although they are doubtless considerable, I do not attach so much weight. But to the total unlikeness of soil, shown not in appearance, but by chemical analysis, the unlikeness of the United States and the East India cottons is to be attributed. The soil in the former—especially the soil in which the finest long staple cotton is grown—is black, sandy, but rich in decaying organic matter; the soil of the latter is also black, but it is a calcareous, clayey soil, the debris of volcanic rocks. Though both black in colour, the two soils are entirely different in chemical and physical characters. The one is rich in organic decayed matter; the other almost sterile from its want. The climates, indeed, widely differ, and by that difference produce their appropriate effects. But the soils, were the climates the same—the black soil of India and the black soil of the United States, so long supposed to be identical—are too widely different to produce the same results, and by their opposite natures sufficiently account for the deterioration of the transplanted cotton plant."

Speaking of the statuary porcelain he says, "It would be difficult to over-estimate the value of this material. * * * * * The successful position taken by the English potters in the Exhibition was due mainly to its introduction, and its prompt adoption by the public. The increased love of art which has been created by the multiplication of examples of statues of a high order through the process, is one of the most pleasing of the results which has attended it. Of the salutary influence of the popular cultivation of art, in a moral and social point of view, there can be no doubt; and on this ground among others, especially in our country, where works of art must necessarily be, for many years to come, confined to copies, we desire to see the fine examples in statuary porcelain largely multiplied."

In furniture the inferiority of the United States is admitted. "We have not," says the reporter, "the wealth (and Heaven grant we may never have) in the hands of the few, which can find only in the result of years of toil a return adequate to its demands; nor have we such poverty among the many as will render labour at mere living wages a godsend thankfully received, and readily embraced. Our mission is other than to equal or excel the world in the products of taste. We have lessons to teach in the capacity of man, rather than lessons to learn in his handicraft. * * * * * Compared with the starving slaves of Old Egypt, Europe is as far advanced as we beyond the miserable system that confines the lace-worker to his perpetual dungeon, or ekes out to the Manchester weaver his miserable dole." " * * * * * In furniture, upholstery, fittings, and general decoration of interior, England has of late years occupied a place of marked inferiority, as compared with her continental neighbours. The furniture of England has ever been in good repute for its sterling qualities, but in form and ornament it has been of the worst." The reason given is the want of training or guides for the workmen. The "sideboard" and "cabinet" marked "Sheffield School of Design," is especially pointed out

as "wretched in conception," but "admirable in execution." Referring to the Austrian furniture, it is remarked, "that only in an old country where feudal customs still obtain, while labour toils without adequate remuneration, and where wealth is unequally distributed, could it be manufactured or patronized."

As to "furs" it is said, "the day has been, perhaps is now, when any large depôt in furs in New York can show in its stock on hand an amount exceeding in value by ten times all that was arrayed in the Crystal Palace. In variety, however, it was worthy of its place." Speaking of sables it is said, "The use in England is mainly confined to the City of London, which city comprises about one-eighteenth of the metropolis called London, where municipal law and custom enjoins its wear by the lord mayor, the alderman, and sheriffs, each having their robes and gowns furred with sable upon all state occasions according to their rank. It is generally known that the livery of London constitutes the freeholders of the corporation. To be free from certain taxes, to buy and sell certain goods as tradespeople, to vote for city officers, and to possess certain other privileges one must belong to the livery—that is, he must be a member of one of some eighty companies, such as the goldsmiths, drapers, pewterers, ironmongers, tailors, &c., which have been in existence from 500 years and more back, paying his annual fee in order to enjoy the freedom of the city. These companies are generally very rich, and have what is called a court, composed of masters, wardens, deputy wardens, &c., whose chief duties appear to be the appropriation of the income of the company they represent, towards weekly and monthly public dinners for themselves and wives. These members of the court are obliged to wear a certain dress, lined and faced with Russian sable fur, upon all public occasions; and as these occasions, where the funds of the company are well vested, require observance some fifty times in the year, the market for the sable fur is not likely to be soon dull—certainly not so long as Parliament allows London to retain its privileges as a close corporation."

In the concluding summary the reporter says: "The genius of Great Britain is mechanism. More than in any country on the globe, mechanism is there extending its dominion over the whole empire of labour. In textile fabrics, in fashioning iron like wood to the most exact proportions, in working the printing press and navigating the ocean, in all agricultural pursuits everywhere, in anything lightening the burden of toil and rescuing human life from dangerous pursuits, mechanism reigns supreme. Beyond this the genius of Great Britain has not gone. Ornament in all her productions is inseparably wedded to usefulness. The creation of the beautiful with her artisans rests only in the adaptability of mechanism. It is said that a better and purer style of national industry is beginning to be observable in England; but however this may be, her best productions, when placed beside similar productions from the continent, show violation of harmony in colour and design, and evidences of neglected taste to the most casual observer. But in mechanism in its highest and noblest ends, in its tendencies to relieve labour of its drudgery, and to delegate to iron, to steam, and to other powers of the inanimate world the burden of toil, Great Britain must be acknowledged to be in advance of all the world."

After adverting to the interest raised by the peculiar products of China, Tunis, Egypt, Persia, and to the degeneracy displayed in those of Greece, the reporter speaks of the "progress" displayed in the Turkish de-

partment, remarking, "The high cost of these shows, indeed, that her improved manufactures are but in their infancy; but it also shows that the country possessing the greatest natural resources of any country in Europe, has started in that race where indomitable determination, the strongest characteristic of the Mussulman, is the sure guarantee of success."

Sardinia is specially pointed out as taking the lead in the states of Italy; and the collection of France is specially spoken of as "the most attractive and extensive of any in the foreign department. * * * * It is the peculiar characteristic of French industry, that all its products touch upon the wants, the comforts, and the luxuries of the million. They deal alike in the beauty of the cottage, and the embellishment of the palace."

The various results of Belgium, it is said, show "that there is not in the world a more industrious, artistic, or pains-taking people."

The Zollverein "showed a force and enterprize of the manufacturing spirit which bid fair to supplant England and France in the markets of the world. In the element of cheapness in production, none can equal the Germans."

The concluding paragraphs of the Report are given at full length, as characteristic of the spirit in which the whole Report is drawn, and of the light in which the New World contemplates the Old.

"Of Norway, Sweden, Denmark, and Switzerland, it is unnecessary to say more than that each, in its industrial products, reflected its peculiar national characteristics. This, too, was equally true of Russia. From these, the grand, and striking, and regal, only came. The seal of the Autocrat was stamped on everything. In all the beauty, and magnificence, and costliness, and display of the Russian division, one saw nothing of the people. It was an exhibition of the enterprise of the executive—of the power of the sovereign—of the resources of the exchequer. It is not intended to be said that no individual contributions were received from Russia. The costly vases made, malachite doors, and heavy silks, were many of them the production of manufactories built up by private enterprise; but in even these the hand of an absolute power was everywhere apparent, encouraging or restraining, tempting forward by the hope of reward, or holding back by the fear of punishment.

"Perhaps the industrial products of no two countries which ever existed, presented so many points of strong contrast as did those of Russia and the United States at the Exhibition. In the one case, everything which was shown was costly; in the other cheap. The compartments of Russia, splendidly fitted up and appointed, were attractive from the princely magnificence of the articles displayed. The compartments of the United States, on the contrary, decorated with great plainness, drew admiration from those who visited them, by the adaptability of every thing they contained for the purposes for which they were intended. Thousands never ceased to gaze with wonder on jewels, embroidery, velvets, silks, and furs contributed from the various imperial establishments of St. Petersburg and Moscow. There were others, however,—and they too were counted by thousands before the Exhibition closed—who found in the water-pails, made by machinery, and furnished at one-quarter the usual price;—in the pegged boots and shoes, between the upper leather and soles of which not a wax-end was drawn;—in the improved household, barn, garden, and field implements;—in the bell telegraphs, and spring chairs, and cooking ranges, and hot-air furnaces, and camp bedsteads;—a degree of intelli-

gent interest excited by the display in no other part of the building. The Russian exhibition was a proof of the wealth, power, enterprise, and intelligence of Nicholas; that of the United States, an evidence of the ingenuity, industry, and capacity of a free and educated people. The one was an ukase of the emperor to the notabilities of Europe; the other, the epistle of a people to the working-men of the world.

"The history of our portion of the exhibition—of the lack of all pecuniary aid from the government—of its early discouragements, vicissitudes, and trials—of its gradually emerging from darkness—of its stoutly-fought battles, its victories, and success, and of its hardly, but fairly, won honours at the close—is all too well known to the whole world to need recapitulation here. It is sufficient to say that we were not misunderstood. We might have sent far more of our productions to England; but that would only have confirmed, not altered, the verdict which the world has given us. We alone of all people exhibited the products of unfettered, untaxed, unpatronized labour. We showed the results of pure democracy upon the industry of men. We demonstrated the progressiveness of the human mind when in the enjoyment of liberty. And we alone, from among the assemblage of two score nations, bore away the palm for intelligent labour."

THE PAPER DUTY.

QUERIES PROPOSED BY THE SOCIETY OF ARTS, MAY 4TH, 1853.

NO. 5.—TO NEWSPAPER PROPRIETORS AND EDITORS.

THE following replies have been received from different Newspaper Proprietors in answer to various Queries as to the effect of the Duty on Paper in their business. They are published in continuation of those received from Paper Manufacturers, Wholesale Stationers, Manufacturers from Paper and Manufacturers using it, and Publishers, which will be found in Nos. 33, 34, 36, and 37 pages, 401, 413, 437, and 449 of this Journal.

1. Does the Duty keep down the sale of Newspapers?

THE EDITOR of *Aris's Birmingham Gazette* says, "No."

THE PROPRIETOR of the *Cheltenham Free Press* says, "I believe that everything which tends unnecessarily to enhance the saleable price of an article does tend to diminish the sale, especially where the article is of a very 'perishable' nature, like a newspaper. A large proportion of the newspapers read by the working classes are those which are met with in public houses. Everything which tends to diminish the cost of a good newspaper would, I believe, operate to increase the number of readers, and more especially of those who would purchase the paper for *family* reading. That the paper duty is not an inconsiderable burden I conclude from this calculation. A full-sized newspaper requires a paper of full 72 lbs. weight to the ream, which is about one farthing per sheet. It is found almost impracticable to publish a provincial newspaper of average quality at fourpence, and many which have begun at such a price, have been compelled to increase in order to keep pace with the demands of the age for quality and quantity. The *Cheltenham Free Press* is among that number. The calculation stands thus:—Manufacturer's charge for

paper (*exclusive of duty*), three-farthings; allowance to agents, three-farthings; cost of stamp and paper duty, one penny farthing—leaving for the cost of producing the paper, one penny farthing, or the same amount as the Government takes for posting papers (many of which are never posted) and for the tax on the material employed."

THE PROPRIETOR of the *Devonport Independent* says, "Yes, to a small extent. The abolition of the duty would doubtless enable newspaper proprietors generally to make some small reduction in their publication prices, and of course reduction in price always tends to increase consumption."

THE PROPRIETOR of the *Durham Advertiser* says, "I can scarcely say that the paper duty keeps down the sale of any paper in the north of England. The duty is such a mere fraction in the cost of the paper to the public, that if it were repealed we could not afford to lower the price."

THE PROPRIETOR of the *Gateshead Observer* says, "I think not. Were the duty repealed, I do not see that the price of the newspaper could be reduced. The duty forms too small and fractional a portion of the cost to admit of a reduction being made."

THE PROPRIETOR of the *Lincolnshire Free Press* says, "In my humble opinion the duty has very little to do with newspapers, unless of immense size and very extensive circulation. Were the duty taken off to-morrow I should not sell an extra paper, nor should I scarcely feel the effect of the repeal. My paper is a double sheet royal (two leaves of *Times* size), and it would require twelve copies to weigh a pound, consequently yielding one-eighth of a penny only on each paper were the duty off, and therefore could not in any way benefit the public, nor myself to any great extent. That on the larger papers with supplements (there are few of these) the repeal might make the cost a halfpenny less is probable; but the sale would not be much promoted by so trifling a reduction."

THE PROPRIETORS of the *Newcastle Courant* say, "There can be no reasonable doubt of the affirmative being the case."

THE PROPRIETORS of the *Norfolk Chronicle* say, "We should say decidedly not."

THE PROPRIETOR of the *Norwich Mercury* says, "I do not think it affects the sale in the slightest degree, for this reason, that the addition per single newspaper the size and weight of the *Times* being about one farthing to the maker, a reduction, if made, would never reach the printer and proprietor. Of course, in smaller newspapers the duty per single copy being less, the probability of reduction is less to the proprietor. Besides, it is proved by almost invariable experience, that as soon as a reduction of duty is probable, the manufacturers raise the price per pound, under the pretence of probable greater demand (without waiting to see the actual effect) or a probable rise in materials; this they are enabled to do most effectually, because the comparatively small number of news manufacturers enable them to agree upon the course they take. To the large newspapers—*Times*, *Illustrated London News*, *Stamford Mercury*, it would give an enormous profit, as they make their own paper, or at least a large portion."

THE PROPRIETOR of the *Northampton Herald* says, "The repeal of the duty would not increase the circulation of the *Northampton Herald*, as no reduction in price could be made on account thereof."

MR. C. D. COLLET says, "I doubt it very much; the whole amount on stamped newspapers is only about 50,000*l*."

2. Does it absorb capital which would otherwise, in a great measure, be applied to the employment of more talent, and to the supply of a better article to the public?

The PROPRIETOR of *Aris's Birmingham Gazette*, says, "Yes."

The PROPRIETOR of the *Cheltenham Free Press*, says, "The amount of paper required for a full-sized newspaper publishing 1,000 copies weekly, would be 144lbs., a sum which in these days of combination would go far towards rendering remunerative the employment of much more talent, cause the supply of a better article to the public, please more tastes, and procure more readers. The circulation of the English provincial newspapers is about 330,000 per week; allow that some are not full size. The paper duty would be a tax upon these of upwards of 250*l.* per week, or 13,000*l.* per year!—a sum which would purchase for newspapers the copyright of many very valuable works of genius, which would be acceptable to newspaper readers."

The PROPRIETOR of the *Devonport Independent*, says, "The amount of capital sunk in the paper duty by all but some ten or twelve leading prints is too small to materially affect the style in which newspapers (with the few exceptions already referred to), would be brought out. A circulation of 1,000 per week is rather above than below the average of country weekly papers, and the duty on such a circulation as 1,000 per week, averages only 35*l.* per annum; too small a sum to make much improvement in the talent employed."

The PROPRIETOR of the *Durham Advertiser*, says, "I have no hesitation in saying, that if the paper duty were repealed we would employ a greater number and better writers, and consequently would produce a better article. I have always considered the great argument in favour of the repeal of the tax is the benefit it will confer on literary men."

The PROPRIETOR of the *Gateshead Observer*, says, "Yes. If the newspaper proprietor had no duty to pay he could conduct his business with less capital, or employ his capital in the purchase of paper of a better quality, and in the general improvement of his Journal."

The PROPRIETOR of the *Lincolnshire Free Press*, says, "In this respect, as in all taxed articles, where a large stock of paper is kept, as in the stationery and general printing business, I rather infer that about twenty-five per cent. is always lying dormant: in other words, were the paper duty of 1*½d.* per pound repealed, I think that there would be about twenty-five per cent. more capital to work with, so that more speculation might be entered upon; and with an increased demand for literary talent and paper for printing, perhaps a better article would be supplied, and a higher rate of wages paid to workmen by manufacturers of paper, and to literary men by publishers."

The PROPRIETORS of the *Newcastle Courant*, say, "We think it does."

The PROPRIETORS of the *Norfolk Chronicle*, say, "As far as we are concerned we again say, No."

The PROPRIETOR of the *Norwich Mercury*, says, "The amount of capital affected is so small in the average of provincial papers, that I cannot see how the quality of the talent employed could be much affected. For instance, supposing the average of the circulation of provincial papers be 2,000 each weekly, which is not far from the fact, the quantity of capital set loose by the alteration of the duty if the papers were of the size of the *Times*, would not amount to above two guineas a week, or about 8*l.* 8*s.* per month, which is the extent of

the supply kept on hand, besides per centage of stamps, being perhaps at an average credit of three months, the difference would be almost imperceptible. The quality and quantity of the talent on a newspaper, supposing the Proprietor to have sufficient capital to work it, will depend more on the character of the Proprietor and Editor than on any other circumstance; and also upon the estimate he puts upon his vocation, and of the value and importance of a well and ably conducted Journal. If he looks upon it as a mere trade by which he is to put so much money into his pocket, he will avoid expense as far as possible, and lend himself to that species of news which is most greedily purchased, and sought after by the masses. If the Proprietor be a person of liberal mind, and if he takes a high view of his profession, he will make a considerable sacrifice of profit to possess himself of the best talent within his reach. But in all cases circulation will depend on population, and on the kind of population as well as upon the number of competing Journals in the district. In a populous manufacturing district the demand will be greater than in such a county as Norfolk, which is almost entirely agricultural, or having a small seafaring population on the coast, and is bounded on the one side by the sea; and whose entire population amounts to not more than Manchester city and its hamlets. Farm labourers do not read newspapers, and the farmers themselves take a paper between two, one passing it to the other at a given time. Norfolk has four newspapers,—*The Norwich Mercury*, which began about 1720, price 4*½d.*; *The Norfolk Chronicle*, which commenced in 1761, price 4*½d.*; *The Norfolk News*, price 3*½d.*, in 1845; and *The Lynn Advertiser*, price 4*½d.* The last began as an unstamped paper about fifteen years since, then went on as stamped once a fortnight; then to a 2*d.* paper, and ultimately, about eight years since (I think), it became a regular newspaper, at 4*½d.* The first three are published at Norwich, and the last at Lynn. The *Mercury* and *Chronicle* are the property of private proprietors; the *Norfolk News* is a Joint Stock Company's property of a certain sect of Dissenters, and has not hitherto paid; the *Lynn Advertiser* is private property, and pays. In the last fifty years a third paper has been started at different periods in Norwich, but they have all failed after a few years, even at the full price; the population and the business of the county not being sufficient to maintain three papers hitherto. The expenses of conducting a paper in the present times have of late much increased, while the largely increased sale of unstamped publications (in reality newspapers though not in name), with the also increased practice of advertising in "Railway Time Table" books, and also annual "Almanack Books," "Compendiums," &c., which are given away by country booksellers, in large numbers continually, although said to be published only once a year, very much affect the number of advertisements in newspapers, which are the main means of the newspaper proprietor."

The PROPRIETOR of the *Northampton Herald* says, "No. In whatever quarter expenditure is necessary, it is now incurred in the management of the *Northampton Herald*."

Mr. C. D. COLLET says, "Most undoubtedly."

3. Has it affected the independence of newspapers, by unduly increasing the risks attending their publication?

The EDITOR of *Aris's Birmingham Gazette* says, "No."

The PROPRIETOR of the *Cheltenham Free Press* says,

"There is no doubt that the present system tends to destroy the possibility of a provincial newspaper being rendered remunerative by the returns from those who should be its supporters, viz., the readers. What course a large number of papers might take as to objectionable advertisements were these risks diminished, may be inferred. In many ways it is obvious that the increased risks caused by these and other taxes do render an independent course very difficult with many."

The PROPRIETOR of the *Devonport Independent* says, "I do not see that it can in any way affect the independence of any newspaper."

The PROPRIETOR of the *Durham Advertiser* says, "So far as my experience goes, not in the slightest degree."

The PROPRIETOR of the *Gateshead Observer* says, "Hardly appreciably."

The PROPRIETOR of the *Lincolnshire Free Press* says, "In the instance of daily papers, and papers of large size and immense circulation, the duty would in some measure, as a 25 per cent. £ s. d. item, affect newspapers; but in the case of the *Lincolnshire Free Press*, I have scarcely cared about the Paper Duty; indeed it has not affected my speculations to any serious amount. I have rarely considered it a grievance not to be borne."

The PROPRIETORS of the *Newcastle Courant* say, "Our paper not being a party paper, but devoted to advertisements, commercial, shipping, and agricultural intelligence, and which deals with local, political, and general news, historically, we cannot speak to this question from experience; but from observation, as to other journals, we should be inclined to believe in the affirmative."

The PROPRIETORS of the *Norfolk Chronicle* say, "No, not that we are aware."

The PROPRIETOR of the *Norwich Mercury* says, "The risks of publication are not affected by the duty, nor is the independence of a journalist. The last is affected more by the law of libel, which, even as modified by Lord Campbell's Act, is still unjust, and subjects the Proprietor to legal difficulties of a most unfair kind. However great his wish to be independent may be, it may be maintained at too great a sacrifice. * * * If the law admitted that to prove a man a thief or a liar, or that the charge as a whole was true, was sufficient, instead of the proof of truth being fettered by legal quibbles, the independence of journalism would be much more secured and strengthened than by any reduction of duty. Speaking generally, I am not of opinion that excellence in newspapers can be attained or is consistent with a low price. Why is it that the *Times* has the finest talent? Because it can afford to pay the highest price. Compel a reduction in its price and its charge for advertisements, and either the profits will cease or fall below what its proprietors consider to be fair, or the best talent will cease to be paid and commanded. If the proprietors of a newspaper wish to have superior talent, with independence of character, and a high-minded appreciation of the duties of a journalist, it must be recompensed highly, and this cannot be done unless the public will pay a fair sum for the paper and for advertisements."

The PROPRIETOR of the *Northampton Herald* says, "No risks attributable to the paper duty have been experienced by the *Northampton Herald*."

Mr. C. D. COLLET says, "I should doubt it; the stamp and advertisement duties are the panniers which weigh down the newspaper. Doubtless the paper duty may be the feather which breaks the donkey's back."

4. Please to state any facts relative to the above, or any other points bearing on this inquiry.

The EDITOR of *Aris's Birmingham Gazette* says, "The repeal of the duty on paper would no doubt be an advantage to newspaper proprietors, as it would enable them to expend the amount remitted in 'the employment of more talent and the supplying a better article to the public.' The relief would not, however, be of sufficient amount to warrant any reduction in the price of a single copy of a newspaper, and consequently would not influence the sale. I cannot see any possible way in which the independence of a newspaper can be affected by the paper duty. It is merely a charge on the material used in trade; and whether duty thereon be paid or not, is a question in no way affecting the independence of a newspaper."

The PROPRIETOR of the *Devonport Independent* says, "As a general rule, all Excise duties are injurious to trade; but I think the paper duty has no superior claim for abolition to several other duties affecting much larger branches of industry. I wish my observations to be understood as referring only to newspapers. I do not pretend to offer any opinion on the bearings of the paper duty with respect to literature in general."

The PROPRIETOR of the *Dumfries Courier* cannot answer the "Queries, which do not appear to him to be exactly those which ought to be put. His opinion generally is, that newspaper proprietors made a mistake in 1837, when they fixed the price of their papers: it ought to have been made higher. In his own case he knows that without the profit from advertisements he could not produce the article at 4½d. As it is, the paper is sold rather under than above prime cost. He does not, therefore, see why the abolition of the paper duty should or could lead to a lower price; but in many cases, at least, it would doubtless encourage increased expenditure by enlargement, more frequent supplements, and better payment for those engaged as contributors, &c. These remarks apply exclusively to the commercial view of the subject. As to 'independence,' his idea is that real independence cannot be affected by the paper or any other duty, or any consideration whatever, save what appears to be right in itself. In this respect, however, he speaks for himself only, not for others."

The PROPRIETOR of the *Gateshead Observer* says, "It is the stamp duty, and not the paper duty, which most potentially restrains the sale of newspapers, and consequently the extended consumption of paper. With a tax of a penny per copy, in addition to the paper duty, it is imperative that the price of the journal shall be high, so as to swamp the impost. Apart from taxation, a new sheet might be published at a halfpenny or a penny, at a profit. Add, however, to the halfpenny or a penny, a penny tax, and the public would not take the article at the price. You must therefore enlarge your sheet and your price until the tax is pretty nearly out of sight. I do not enter into the question whether or not, taking all the circumstances into consideration, the newspaper stamp should be abolished. It has its advantages and disadvantages. On the whole, and on public grounds, I think the duty should be removed."

The PROPRIETOR of the *Lincolnshire Free Press* says, "So far as I have considered the matter of the paper duty, I have thought it of little moment in my own individual case, considering the enormous revenue it yields. Yet it must be felt as a serious item to papers like the *Times*, *Illustrated London News*, and others that consume largely of paper; but then look at the enormous profits of these papers. The revenue would

not suffer so much by repealing the news stamp. In a word or two, my paper has always been a struggling print through the stamp and the advertisement duty,* not through the paper duty. The penny stamp nearly doubles its price. If I overprint fifty some weeks, I am mulcted of 4s. 2d. in stamps; but the paper duty on this fifty being only 6d., I scarcely feel it. Admitting that perfect freedom is required for newspapers,—that food for the mind should be at least as unrestricted as food for the body,—we do well to aim at the removal of the paper duty. But the repeal of the paper duty alone, so far as it would affect newspapers, would chiefly favour the leviathan class, which generally do well enough as matters now are. The penny stamp is the greatest curse, taxing my sheet *trebly* that of the *Times*; when the stamp is off supplements, then still more; and its worst feature is in being imposed on those actually sold in the districts of publication, few of which ever pass through the post. Let a postage stamp be used, and newspapers would soon be doubled in circulation, while the revenue would be the gainer from postages.

The PROPRIETOR of the *London Mercantile Journal* says, "I have been in business nearly half a century, and never found the price of paper interfere anything like the Advertisement Duty.* As a newspaper printer, I am brought directly into contact with the authorities of the Stamp Office; and although the paper-maker has all that annoyance which the interference of a Government tax imposes, still I do not feel it; and when I go to market, the duty on paper never enters into my calculation, more especially as paper has been falling in price for some time past. The greatest benefit to the journeyman and newspaper proprietor would be the withdrawal of the Stamp-office authorities. Abolish the Advertisement Duty, and stamp only such papers as are wanted for country circulation, and the trade would receive such an impetus, that the demand for paper would be greater than could be produced."

The PROPRIETORS of the *Norfolk Chronicle* say, "We think that if the duty was taken off, it would be a good thing for the printers, but that the public would not gain anything by it, the duty being so small as compared with the price of a full-sized newspaper."

Mr. C. D. COLLET says, "The Paper Duty on the largest newspapers is about a farthing, only a quarter of the Stamp Duty, and the effects of the latter will swallow up those of the former."

ON COMMON SALT—THE SOURCES FROM WHENCE OBTAINED, AND THE PROCESSES INVOLVED IN ITS MANUFACTURE. WITH OBSERVATIONS ON THE ORIGIN OF SALT AND OTHER SALINE BODIES.

[Continued from page 467.]

BY W. BOLLAERT, F.R.G.S.

AMERICA—continued.

PERU.—In the north is the desert track of Sechura; and at Huarmey, in 10° S., the soil is washed for nitrate of potash. At Huacho, in 11° S., there are considerable salinas on the coast, where salt enough is extracted for the consumption of the greater part of Peru and Chile. At Pisco, the southern extremity of the bay, in 14° S., beneath a bed of broken indurated clay and sandstones, a stratum of salt is found, extending from 50 yards to

100 yards from the sea, and sometimes more. This salt contains sulphate of lime, magnesia, &c., and is not considered very good for preserving meat or fish. In the interior, near Cuzco, salt is prepared from brine springs. In the country of the wild Chunchos, near the mountains of Vitoc, there is a stratum of salt, coming from the top of the hill, running S. W. and N. E., a distance of three leagues; it may probably be the continuation of the great salt bed of Maynas. Very many other localities in Peru might be cited; but the province of Taramaca, in the department of Moquegua, South Peru, 20° S., will be adverted to somewhat in detail, in which country the author, and his old friend and fellow-traveller, Mr. George Smith, had opportunities of examining deposits of salt, nitrate of soda, and other saline bodies, from the sea-shore, to about 15,000 feet in the Andes. During the summer, the south wind blows during the day, but at night it veers towards the Andes; thus the temperature of the air is depressed, dew is formed, but as little of it falls on the land, it will account for the arid and desert character of much of the coast of Peru. It seldom or ever rains in these latitudes. The physical features of the province are—1. Arid porphyritic mountains on the coast, rising sometimes abruptly from 2,000 to 6,000 feet in height, and thirty miles wide, having large hollows and undulations, many covered with salt. 2. The plain of Tamarugal, about 3,500 feet above the sea, thirty miles wide, covered principally with sand, salt, and nitrate of soda. 3. A desert range of mountains, which may be called the base of the Andes, from 7,000 to 8,000 feet high, and twenty miles wide, where much gypsum is found. 4. An elevated district follows, and here for the first time is seen coarse pasture, brushwood, and cacti, vegetation disappearing at about 16,000 feet. 5. We are now in the Andes, in which are many high and colossal mountains. Mr. Smith and myself ascended Tata Jachura, which is 17,000 feet high. Lirima may be 24,000 feet high. In the Andes there are considerable depressions and undulations, giving rise to fresh and salt water lakes; and there is one large salt plain in particular, known as the Pampa de Sal, at an elevation of about 15,000 feet. We have seen that bay salt is produced naturally in North Peru. At Ceremeño, south of Iquique, salt is found in a plain somewhat inland, and from fifty to eighty feet above the sea, which plain has been but recently uplifted from it. On the coast and in the vicinity of sea-shells, this natural bay salt undergoes decomposition, giving rise among other products to carbonate of soda, and chloride of calcium. On leaving the port of Iquique, (at which place there is no water, excepting that distilled from the ocean) for the interior, and having gained the summit of the coast escarpment, much surface salt is met with, looking as if it had oozed out of the earth. The scene is one of absolute sterility. In the hollows and sides of the hills are large superficial collections of salt, and salt mixed with sand, containing chloride of calcium, which is used as a building material at the adjacent silver mines of Huantajaya and Santa Rosa. When the saline matters are free from earthy impurities, they are known as salares, some of which are of great extent, and where there is water near the surface, which generally has run and drained through the great plain to the east. Mr. Smith wrote to the author in 1850, "I have often thought on the origin of the large quantities of salt found on the western side of the great plain, without coming to any conclusion. In some parts it is found to continue for leagues on level plains, on the sides of mountains, and at the bottom of deep hollows, like dry lakes or ponds." We now come to the Pampa or plain of Ta-

* It should be stated, that the replies to these Queries were received some time back, and before the decision of the House of Commons abolishing the Advertisement Duty.—Sec. Soc. OF ARTS.

marugal. It takes its name from the Tamarugo, a species of mimosa, which grows there wherever water from the ravines to the east reaches the plain. In the same localities there is buried under the soil large collections of dead wood, sometimes called fossil wood. The surface of the plain is strewn with pebbles and sand; then follow salt, nitrate of soda, borate of lime, glauberite, pickeringite, and other saline bodies; marly strata succeed, reposing on beds of rounded stones; and lastly, rocks of trachyte are found. This surface salt is used by the inhabitants, as also in the silver amalgamating works. The nitrate of soda, when purified, is exported, principally to Europe, where it is used in the manufacture of nitric and sulphuric acids, as a fertilizer, and in many operations of the arts. In the times of the old Spaniards, the deposits of nitrate of soda were worked to a limited extent; but about 1830, mainly through the perseverance of Don José Sandes, it was after awhile introduced into Europe. Its price has varied; at present (March, 1853) it is from 19s. to 20s. per cwt. Since 1830 to 1852, 5,350,000 tons have been exported from Iquique. Mr. Smith, and his partner Dr. José Sandes, (one of the principal firms in the nitrate of soda trade) alone export 30,000 tons annually; and with their projected improvements in the refining process, &c., it is expected that this quantity will be much increased. The nitrate of soda grounds are of great length, but vary in width, the average being 500 yards; in some places it is from seven feet to eight feet thick, and is occasionally quite pure, though it is generally mixed in various proportions with salt. A good average specimen gave, according to Hayes:

Nitrate of soda	64.98
Sulphate of soda	3.00
Chloride of sodium	28.69
Iodic salts	0.63
Shells and marl	2.60
	<hr/>
	99.90

Richard Phillips found the refined nitrate as brought to this country to consist of

Nitrate of soda	97.00
Water	1.50
Salt	0.50
Sulphate of soda and insoluble matter	1.00
	<hr/>
	100.00

A refined sample examined by Teschmacker, which came into the market in 1853, was found to be composed of

Nitrate of soda	95.00
Insoluble matters and moisture	2.60
Sulphates	0.40
Muriates	2.00
	<hr/>
	100.00

The caliche or nitrate of soda is quarried, put into boilers, water introduced, and the whole boiled. The nitrate is held in solution; whilst the salt, sulphates, and earthy matters, separate. The clear saturated solution is run into shallow troughs and crystallized. The Pampa de Tamarugal contains sufficient nitrate for the consumption of Europe for ages; the desert of Atacama yields it, and it is met with in the Andes and the eastern plains. Underneath the nitrate beds, Mr. Smith has lately quarried a new boracic acid mineral. The following analysis furnished by Mr. Dick, of the Museum of Practical Geology, under the superintendence of Dr. Percy, gives its constituent elements—

Water	27.22
Sulphuric acid	1.10
Lime	14.32
Soda	8.22
Potash	0.51
Chloride of sodium	1.65
Sand	0.32
	<hr/>
	53.34

Boracic acid and nitric acid by loss . 46.66

100.00

There did not appear to be above 1 per cent. of nitric acid; minute traces of iodine and phosphoric acid were observed. Hayes, of New York, who was one of the first to examine the mineral, gives—

Boracic acid	46.11
Lime	18.89
Water	35.00
	<hr/>
	100.00

Ulex, of Germany, gives the following of a sample:

Boracic acid	49.5
Lime	15.7
Soda	8.8
Water	26.0
	<hr/>
	100.00

Mr. Anderson, of Glasgow, lately procured 47 per cent. boracic acid from a specimen, and observes that it is likely to be of much importance as a source of borax.* Lord de Manley says, that if found in abundance, it will be of essential service in many branches of manufacture; and, speaking of its composition, observes, there is nothing therein to deteriorate its quality as a flux, whilst its white colour, and absence of any metallic oxide, render it equally suitable to the glass crucible and to the potter as a glaze. Small parcels only have as yet arrived in England: these have generally sold for 60l. per ton.

Wherever water from the Andes gets into the Pampa de Tamarugal, running often over its surface, and that water not very saline, there a few mimosas grow. Now, we must look to this surface-water as the vehicle which has brought down from great elevations the saline matters found all over the plain. In the south, is the very brackish river of Loa, with salt-streams running into it; on the north there are two other streams, often very salt: these rise in the Andes and run into the sea. With regard to the origin of the nitrate of soda in South Peru, it may be stated that there is little or no organic matter in the desert soil from the Andes to the sea-shore; the whole country has been for ages arid, rocky, sandy, marly, saliferous deserts. The nitrogen and oxygen of the air may in some way or other yield nitric acid—ozone, and the chemical rays of the sun, may play a part; still, if we have to look to volcanic sources principally for the formation of salt and other chlorides, why not recur there also for the origin of nitrates, borates, sulphates, iodates, &c.? There are considerable masses of level land in the volcanic Andean regions of South Peru. In one is the great deposit of surface salt, the Pampa de Sal; it is a few miles east of the volcano of Isluga. It was on beholding so large a collection of salt in the elevated position of 15,000 feet, that so strongly impressed the author with the idea that we ought to look for the origin of the greater portion of saline materials to direct volcanic sources. In this way, may we not account for the large quantities of salt in the

* Vide "Jury Reports of the Great Exhibition," p. 524.

Andes of Chili, Peru, Mexico, and in the United States, as also in the more elevated parts of Europe, Asia, and Africa? Then, the melting of snows and rains would wash much of this soluble material into the sea; and, without entering here into the question, as to the changes in organic matter that may have been going on from the period when the ocean had its commencement—for, according to what the author has intimated, the saline contents of the sea ought to be on the increase—let us start from the period when our planet commenced a separate existence. The cooling of the crust of the globe would now take place, enveloped in the gaseous elements, principally of oxygen, hydrogen, and nitrogen. A portion of the oxygen and hydrogen would combine *chemically* to produce water—another portion *mechanically* to form the atmosphere. Thus, then, in the beginning, the waters would form a *fresh-water ocean*; organic matter would be peculiar to it; but, governed by the change from a fresh-water character to that of it becoming saline, not containing at present as much as 4 per cent. of solid matter. Halley, the astronomer, supposed that the ocean derived its saltiness from the land by means of rains; and he observes, “If the increment of salt could be found for any given number of years or ages, we should then be able to work backward by the rule of proportion; and discover the time when the sea began to grow salt;” and which might also lead, comparatively, to a knowledge of the age of our planet.

With reference to the Author's observations, and those of others, he will conclude with the following *resumé* as to the origin and sources of salt, adverting only to the more salient points.

I. Bay salt is deposited by solar evaporation from sea water.

II. Another variety of bay, or rather sea salt, is procured from sea water, by allowing it to run into shallow reservoirs on the surface of the ground. Here it is partially evaporated by the sun's heat, and then by artificial means; a purer chloride of sodium is thus obtained, in consequence of the separation of the “bittern” from it.

III. Another and harder species of bay salt is occasionally deposited near the level of the ocean, and a few feet about it, as on the coast of Peru: here it has been recently uplifted above the sea.

IV. Salt is produced in Russia by freezing sea water and evaporating the brine. Another effect of low temperature is to decompose a portion of salt, and of converting the sulphate of magnesia of the brine into sulphate of soda and chloride of magnesium. The formation of sulphate of soda in this way may be one of the causes in the production of glauberite in Peru, and other places: that is to say, the saline lakes in the Andes and other frigid mountainous countries, would, particularly in winter, be reduced to a very low temperature; then the chemical, as well as other changes, would be produced.

V. Salt, having risen with the vapour of water, or with the spray of the ocean, or from inland salt lakes, and there deposited.

VI. Rock, or fossil salt, is found constituting portions of mountain ranges nearly all over the world. From the small per centage of saline matter in sea water (not 4 per cent.), we can hardly look to the ocean as the origin of so much *nearly pure chloride of sodium*, but rather to sources of a volcanic character, produced at various epochs, and under varying circumstances. During volcanic eruptions with vast quantities of sulphur, muriatic acid escapes, and salt has been found sublimed about craters. Sea water may find its way into the igneous interior of the earth; the heated water

and steam may play an important part in assisting chemical operations. However, the two elements in the production of salt are chlorine and sodium.

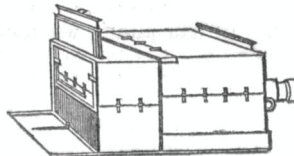
VII. Saline lakes found at all elevations, and in the case of the Dead Sea, below the level of the ocean. Water formed by the melting of snows and rains would dissolve the salt found in higher positions, washing it down into hollows; when these waters became saturated they would deposit salt, and in summer some would dry up, leaving a cake of the substance.

VIII. Brine springs met with everywhere, such being formed by water percolating the earth, then coming into contact with depositions of salt, producing springs, lakes, and streams, from which the saline matters are found, in some cases, to remain in hollows and plains, forming large tracts of surface salt sometimes but erroneously called rock salt.

IX. Saline bodies, formed by the decomposition of volcanic and other rocks. The albites, or soda granites, are common in the “New World,” the red granites yielding potash, as in India;—such decompositions would go on at all elevations, and by the aid of water the soluble parts would find their way into lower levels, and ultimately into the great basin of the ocean.

A NEW FOLDING CAMERA.

A new form of folding camera has just been registered by Mr. Ottewill. It combines the sliding and folding principle. It is composed of two folding bodies, the one sliding within the other, the outer one folding over the inner one when packed up. The inner one, when in use, is made firm and rigid by the insertion of a narrow



frame sliding into the front. The whole packs into a very small compass, in a leather case, and is remarkable for the simplicity with which the two principles are combined. The accompanying wood-cut sufficiently explains the construction. Great portability is obtained with the requisite strength, firmness, and efficiency.

HOME CORRESPONDENCE.

PATENTS.

SIR,—When the letter signed “Cosmos” appeared in this Journal, some three or four months ago, I was asked to write an answer to it; and I remember that that gentleman did me the honour to notice what I had said on the subject of patents when I explained my new lock to the Society, with the remark that I evidently did not understand the principles of the patent laws; which he then proceeded to expound himself, historically and philosophically, beginning somewhere about the time of Tubal Cain, and introducing an episode about James Watt and the steam-engine, but forgetting that much more material and awkward fact for his argument, that if Watt had not also been lucky enough to hit upon the clumsy expedient of the sun-and-planet-wheel motion, for the purpose of evading a patent which had just before snapped up the monopoly of the crank, he would not have been able to make steam-engines of any use without first satisfying the exorbitant demands of the monopolist

of the crank; and those demands, be it remembered, would be proportioned not to the value of the crank at the time it was invented, but to the new value which it immediately acquired by Watt's own invention.

I only mention this *obiter*, as I shall probably have to advert to it again among the other unjust effects of patents afterwards; and that is all I intend to say about Cosmos's letter—partly because I remember nothing more of it than that there was very little in it worth remembering, and further, because I have never any disposition to discuss anything with anonymous disputants, who can say what they like without any risk of exposure; and the reason why I return to the subject now is, that I have been again asked to do so, in consequence of the discussion being reopened in the Journal of the week before last, and because I have now some time to spare, which I had not three months ago. On the other hand, however, I have the disadvantage now of having no books to refer to, and of being in a place where I have very little chance of getting any that would be of use.

As I am going to advocate the abolition of patents, or at least a preliminary measure with a view to it, let me say at once that I am very glad this Society (for I suppose it was in a great measure their doing) succeeded in getting patents made cheaper—First, because, if inventors have the natural right (which all patent laws assume) to prevent anybody else from inventing the same thing, or at least from using their invention if they do, then there can be no decent excuse for making them pay several hundred pounds for the piece of parchment, without which they cannot even go into battle in Westminster Hall to defend this natural right. I say no decent excuse, for the standard and stock excuse which used always to be made for dear patents, was really suicidal and subversive of the theory of patents altogether, viz., that if they were too cheap, they would become so common as to be inconvenient and obstructive to the progress of science: as if it could be too common for men to be allowed to defend their natural rights without paying 300*l.* or 400*l.* for “deputy-chaff-waxes,” and that sort of official rubbish.

Secondly, I am glad that patents have been made cheap, because I have no doubt they *will* become so common as to be too manifestly inconvenient and obstructive to the progress of science, to be allowed to remain many years unabolished and unconsigned to the great limbo to which all protectionism seems doomed. I remember Mr. Brunel, no bad judge, I should think, making this remark aside to me in the chair of the Society, one night when somebody was congratulating them on having opened to inventors the millennium of cheap patents. Already, I believe, they have got to be reckoned by thousands in a year; and therefore I am not sure that it would not be the best plan for their opponents to do nothing to discourage inventors from getting patents as many and as frivolous as possible, but for one practical suggestion, which I think is worth attending to without delay. I mean that in every patent granted henceforth, there ought to be inserted a clause, similar to that which is inserted in all railway acts, and in appointments to various offices, viz., that the company, the salary, or the patent, shall be held subject to any future legislation on the subject. If the opponents of patents are wrong, and the public continues to admire patents, the patentees will not suffer by the clause. If, on the other hand, it is less expedient, after a few years' more experience, to stop the granting of patents, it will be a serious evil to have a good many thousand of the patents, which are now growing as fast

as mushrooms, still outstanding and incapable of being abolished, as Parliament neither will abolish them without compensation, nor can possibly give any compensation for them. With this view, therefore, I think it is not premature to direct attention to the question of the expediency, and the ultimate probability of abolishing patents; though I am quite aware that there is no probability of that event happening until the public has had several years' experience of the advantages of cheap patents; I may add, until they have had some time to recover from the startling effect which the promulgation of the doctrine of no patents has upon most people when they first hear it.

I confess it had that effect on me. Almost the first person from whom I heard it was Sir William Reid, who told me that as Chairman of the Executive Committee of the Exhibition, he had been asked by a distinguished member of the Society to read a number of papers in favour of cheap patents, and that he had read and returned them with the answer, that they had convinced him, to his own surprise, that there ought to be no patents at all. It is well known that many other persons of eminence and experience (though Cosmos and the patent agents probably consider them all incapable of understanding the first principles of patents), have settled down into the same conviction, some from one set of reasons and some from another. The reasons which appear to me to lead to that conclusion I will now explain as well as I can.

I said that all patent laws, or their defenders, assume that an inventor has a *natural right* to prevent anybody else from using the same invention, who may have, either subsequently or simultaneously, or even previously (if he has not published it), invented it himself, quite independently, or made some improvement in it not sufficiently different to be held by an intelligent British jury, with the aid of the invariable conflict of scientific evidence, to be a distinct invention: and I do not suppose that any advocate of patents would be inclined to abandon that position, which is certainly their strongest, though in the extremity of argument they are sometimes driven to resort to others, which I shall not forget to deal with. But first let us consider this “natural right” view of the case; of which we may remark by the way, that patents for inventions were not originally established on any such ground, but were a relic saved from that system of granting monopolies for the sale of everything which had become one of the national grievances two or three hundred years ago.

Another incidental remark we may make upon it is, that if inventors have a natural right to a monopoly of their own inventions, as many persons say they have, just as much to their own fields, or the goods in their own shops, which the law protects for them, the law has really been very unjust to them, as it secures them only fourteen years' enjoyment, with a chance of seven years more if they can persuade the Privy Council that they have not made money enough out of it in the fourteen years. The *minimum* period of copyright is just three times as long, and it may be much longer, and there have been considerable advocates for a perpetuity of copyright; but I never heard of any one venturing to propose a perpetuity of patent right. As I have mentioned copyright, and at first sight the analogy between them appears striking, I will dispose of that point at once. I was surprised to see that none of the witnesses before the Patent Committee did so, though the analogy was several times alluded to. Copyright does not prevent anybody from writing every word that he could have written if there had been no copyright, for the obvious reason that no

two persons could have written the same thing independently. It does not even prevent two people translating the same foreign book, provided the Court is satisfied (and luckily that has to be decided by a Judge, and not a Jury), that the second version really is a translation of the book, and not a copy of the former translation. Much less does copyright prevent anybody from writing a better book on the same subject than any existing one, though it may contain everything that the existing one contains, provided again it is not obviously copied from it. But the complaint against patents is, that they do interfere with *bonâ fide* inventors and improvers, and so obstruct instead of assisting the progress of science, as was remarked by the Jury on Philosophical Instruments in the Great Exhibition, in their Report, although I know that the chairman of that Jury had been a strong advocate for making patents as cheap, and therefore as numerous, as possible.*

The patent man will probably say, it may be true that every now and then a patent may interfere with a subsequent or a contemporaneous *bonâ fide* inventor of the same thing, or even a better thing slightly different; but that is no reason why I should not enjoy the protection I am entitled to; and if you say it is unfair in me to interfere with other inventors, it is at least as unfair to allow mere copiers, who are no inventors at all, to avail themselves of my invention without paying for it. But I say that is a reason why he should not enjoy the protection he says he is entitled to. The public has a right to say to such a man, if you cannot invent a law by which you can have the protection you say you are entitled to without running the risk of interfering with other people who, if you were out of the way, might have invented the same thing and perhaps a better thing, you must be content to remain without protection, and it is not worth while to discuss the question, whether you would have any right to it if you could have it without injury to other people, or inconvenience to the public whom you ask to interfere and make a law for your benefit.

But is there any such right? It is very easy of course to say there is; and just as easy to deny it; and as one may be paired off against the other, on which side does the *onus probandi* lie? Clearly on the side of those who require the interference of the law for their protection. The way it is usually put by them is this: it is very hard that a man should spend his time and money in making experiments in order to work out an important invention, and then, as soon as he has produced it, find it taken out of his hands by some rich manufacturer who can reap all the profits which ought to belong to the inventor. Now as it is no use arguing without the least chance of convincing anybody, I am not going to deny that that is a hard case, or that it would be desirable, if you can without doing greater mischief, to interfere in some way for the protection or compensation of meritorious inventors under these circumstances; and before I finish I shall have a word to say on that subject. But remembering the very true saying of a famous judge, that "hard cases make bad law," I repeat that this, like many other hardships, must be endured so long as those who suffer them cannot find out any remedy except one which will only turn the injustice from themselves on to somebody else, and at the same time interfere with the general good. But I say further, that this kind of hardship is enormously

exaggerated. Painful men working out important inventions at vast expense of time and money, are *not* the common case of inventors by any means: very much the contrary. Far the largest number of really useful inventions are made without any considerable expenditure of either of those things. The people who most frequently consume their lives in this way are that proverbially unfortunate class of mere inventors who are lured away from their own proper business (if they have any) by delusive hopes of making a fortune by a patent; generally very ignorant of scientific principles, and (as I said a few weeks ago) often resenting any attempt to enlighten their ignorance. If the abolition of patents diminished this class of inventors I should think nobody will deny that it would be more a matter for rejoicing than for regret.

I said the majority of inventions are made without any great expenditure of time or money. It is notorious that not a few of the most important have been made by accident; some even by mistake. There is a physician from America now making his fortune in London, by a discovery of a specific for a large and fatal class of diseases, which he made by a mistake, having accidentally applied one thing instead of another to a case of that disease. Nobody of course can grudge him the fortune he makes, because he is benefiting mankind as well as himself; and yet nobody can say that he has earned it by the expenditure of time, money, thought, or science, in arriving at the discovery. It is easy to see that a vast number of chemical, if not mechanical discoveries, or inventions, may be made by accident, or in a moment; and chemical inventions are every day becoming more important than mechanical ones. And even when they are made, after spending a good deal of time on them, remember that the time is really spent on the failure, or on the unsuccessful attempts, not on the invention itself, which is generally, at last, the work of a moment; or what one may poetically call a flash of inspiration. A sufficiently skilful man would have hit upon the right thing at once; and I know of no other case in which a man is entitled to ask for compensation for the time which he has spent in *not* doing what is wanted.

And therefore, although it may seem a startling proposition, I go at once to the bottom of the claim for protection of inventors, on the ground that they may have spent a great deal of time and money in arriving at their invention, by denying that that is a ground for the interference of the law on their behalf: in other words, I deny the natural or moral right of an inventor to stop the inventions, or the improvements, or the works of other people, in order that he may have the opportunity of making a large fortune by the result of a single piece of skill,—a single new application of science, perhaps a very slight step in advance of what has been done before; perhaps no advance at all; a single piece of lucky observation, accident, or mistake; or even the result of a long course of unprofitable and unsuccessful experiments, at last ending in the right one. And here I must stop for this week, remaining

Your's faithfully,

E. B. DENISON.

Ben Rhydding, Leeds, 16th August, 1853.

PARLIAMENTARY PAPERS.

Fordingbridge, Aug. 10th, 1853.

SIR,—My attention has been called to an article in your Number of July 29th, on the subject of Parliamentary Papers.

* I should mention, that though I was nominally a member of that Jury (X), I did not act upon it, finding the business of the Class X *b*, which was carved out of it, and of which I was chairman, quite as much as I could attend to.

Having from the first entertained a very strong opinion as to the desirability of making selections from their public property, in the widest and fullest sense of the term, through the medium of our Mechanics' Institute Libraries, I greatly rejoice to observe the disposition evinced by the Committee of the House of Commons to meet our wishes.

It occurs to me at the present stage of the question, that it would be well for the Society of Arts to classify Institutions with reference to this subject, that we may come at something like the precise nature of their different requirements.

As is well remarked in the report of the committee, all Institutions do not require, and could not value all the reports. Let then the Society propose the Query to each Institute: Which of these three classes of reports would be useful and acceptable to your members; those relating to manufactures, agriculture, or maritime pursuits? Perhaps a fourth and most important class may be named, which would be eagerly accepted by all; those, viz., relating to the sanitary and educational condition of home and the colonies.

The replies to these Queries would elicit much information on the subject, and would probably form a guide to the Society in their further endeavours with reference to it.

I am, Sir, your obedient Servant,
W. F. CHUBB.

MISCELLANEA.

PROPOSED MERCANTILE AND MARITIME COLLEGE IN THE CITY OF LONDON.—The *Bankers' Circular*, in writing on this subject, says, "that the object which the projectors of a Mercantile and Maritime College have in view is, not to make it an educational establishment for youth, but so to arrange its several departments, as to bring together into one focus a complete combination of theoretical and practical information bearing upon mercantile and maritime affairs. If we enter into the details of these two departments, we shall find that the separate branches open a wide field for national enterprise. If we take each of them separately, it is probable that it may be said that we have the means of acquiring a knowledge of them in establishments already devoted to such purposes. But upon a closer examination we shall find that such is not the case. We have our universities, our private colleges, our proprietary and our private schools—we have also our museums, our literary societies and public lecture-rooms; but in these we find such a want of unity of purpose, that they cannot supply the information which it is proposed to do by the establishment of a Mercantile and Maritime College."

JACQUARD LOOM.—Two nieces of Jacquard, the well-known inventor of the loom which bears his name, have been compelled, by poverty, to offer for sale the Gold Medal bestowed by Louis XVIII. on their uncle. The sum asked was simply the intrinsic value of the gold, 20*l*. The Chamber of Commerce of Lyons, becoming acquainted with the circumstance, agreed to become the purchasers of it for 24*l*. "Such," says a French Journal (*Cosmos*), "is the gratitude of the manufacturing interest of Lyons for a man to whom it owes so large a portion of its splendour."

THE AMERICAN EXHIBITION.—The New York correspondent of the *Times*, in his letter dated "July 23rd," a week after the opening, writes that "there are two American inventions which are likely to affect to some considerable extent the fortunes of mankind. I speak first of an entirely new thrashing-machine, which, with a four-horse power, will thrash, clean from smut, winnow, measure and bag from 1,000 to 2,000 bushels of any kind of grain or seed (except maize or Indian corn) per day. It is a far greater invention than M'Cormick's reaper, and is likely to attract great atten-

tion. The second is a new printing press, which prints from uncut paper, rolling from a cylinder, and cuts and folds with perfect regularity 30,000 copies per hour. There is no counteraction in the process, and, consequently, no time lost in returning motion. Both sides are printed at the same time, and 30,000 per hour is a low estimate, since, by increasing the speed, they can be printed as fast as paper or cloth can be unrolled from a cylinder. The inventor declares that he can print one mile of newspaper as fast as a locomotive can run on a railway. With perfect machinery and arrangements he may do it. His present experiments demonstrate a practical principle, and the invention is looked upon with wonder and delight."

CLARKSON'S LIFE BOAT.—This boat is composed of sheet cork, canvas, and thin wood, alternately combined by some adhesive substance. She is 23 feet long, 7 feet 6 inches beam, 2 feet 7 inches deep, and 2 feet 4 inches sheer of gunwale. It weighs 23 cwt. including ballast, being, it is said, from 15 cwt. to 17 cwt. less than either Capt. Washington's or Mr. Peeke's new life boats, of the same dimensions. There are raised air cases at each end, which detach in case of need, and can give buoyancy to 150 persons. This boat was recently tried at the Royal Dockyard, Woolwich, when twenty-eight men were placed in her, and though the delivery tubes were open for the free access of water, yet the lowest part of the gunwale was twelve inches above the water.

INDUSTRIAL INSTRUCTION.—The Dean of Hereford and Dr. Henry, of Haffeld, offer the following prizes to be competed for by the Masters of Elementary Schools for the Industrial Classes in the County of Hereford,—of 5*l*., 3*l*., and 2*l*., to be given to those who pass the best examination in what has been termed "the Science of Common Things," the examination in writing and *viva voce* to take place in Hereford during the Harvest Holidays of 1854. A prize of 1*l*. to the pupil teacher or candidate in his last year, or whose apprenticeship is just expired, who passes the best examination in the same subjects. Also prizes of 3*l*., 2*l*., and 1*l*., to be given to the Artizan class of the Hereford Elementary Drawing School, and for which the Schoolmasters included in the foregoing may compete. All the prizes to be given in books. It is intended to print an outline of the subjects with reference to books, which will be sent to those who think of being candidates, in order that they may have a more definite idea of what is meant: this will, at the same time, suggest subjects for study in which every good schoolmaster ought to be informed, and without a knowledge of which he can scarcely be thought equal to the wants of the present day.

PARLIAMENTARY REPORTS.

SESSIONAL PRINTED PAPERS.

- Par. No. *Delivered on 11th August, 1853.*
 713. Post-Office Receiving-Houses, &c.—Abstract of Return.
 803. Dockyard Appointments, on Case of Lieut. Engledeue—
 Report from Committee.
 823. Merchant Seamen's Fund—Copies of Letters.
 857. Caledonian Canal—Forty-eighth Report of the Commis-
 sioners.
 657. Bills—Fisheries (Ireland), No. 2.
 900. " —Corrupt Practices at Elections.
 802. " —Summary Jurisdiction (Ireland).
 Delivered on 12th August.
 834. Metropolitan Commission of Sewers—Return.
 839. Greenwich Hospital Schools—Annual Report.
 848. Clitheroe Election—Report from Committee.
 901. Bill—Petty Sessions (Ireland).

- Delivered on 13th August.*
 748. The Ship "Novello"—Report from the Committee.
 912. Bills—Registrar of the Privy Council.
 913. " —Liberated Africans (Sierra Leone).
 914. " —Passengers' Act Amendment.

- Delivered on 15th August.*
 661 (1). Berwick-upon-Tweed Election—Index to Minutes of
 Evidence.
 788 (1). Queen Charlotte's Island—Copy of Correspondence.
 851. Decimal Coinage—Report from Committee.
 924. Criminal Code (Malta)—Return.
 541. Metropolitan Commission of Sewers—Plans.
 867. National Gallery—Report from Committee.

868. Clitheroe Election—Minutes of Evidence.
910. Bills—Burgh Boundaries (Scotland).
915. „ —Militia Pay.

Delivered on 16th August.

898. Peterborough Election Petitions—Report from Committee.
645. Calicoes, &c.—Return.
849. Omagh Nunnery School—Return.
922. Bill—Government of India (Lords' Amendment).
Russia—Correspondence.
China—Order in Council.
China—Papers relating to the Civil War.

PATENT LAW AMENDMENT ACT, 1852.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

From Gazette, 12th August, 1853.

Dated 26th April, 1853.

1000. J. C. Haddan, Chelsea—Cartridges and wadding.

Dated 21st May.

1260. H. J. Scoutetten, Metz—Plastic compound for ornaments.

Dated 6th June.

1388. J. W. Friend, Canute-road, Southampton—Measuring distance run by ships, &c.

Dated 7th June.

1399. A. M'Dougall, Manchester—Soda and potash.

Dated 17th June.

1480. J. Hogg, jun., Nicholson-street, Edinburgh—Application and combination of glass, porcelain, &c., of the kind called Scagliola and Majolica ware.

Dated 14th July.

1672. W. Henderson, Bow-common—Furnaces for smelting.

Dated 18th July.

1708. P. A. L. C. de Fontainemoreau, 4, South-street, Finsbury—Equilibrating weight of atmospheres. (A communication.)

Dated 25th July.

1742. J. B. Howell, Sheffield, and W. Jamieson, Ashton-under-Lyne—Saws.

Dated 26th July.

1753. J. Dawson, Linlithgow—Preventing fraud in drawing off liquids.

Dated 27th July.

1765. J. Knowles, Manchester—Looms.
1767. A. L. du T. de Beaujeu, Paris—Rotatory engines.

Dated 28th July.

1769. C. Cummins, 148, Leadenhall-street—Clock escapements.
1771. T. Forster, Streatham—Boots and shoes.

Dated 29th July.

1773. T. Dethier, Pimlico—Mortising, drilling, and boring machine.
1774. G. Jarrett, London—Stamping or printing coloured surfaces.
1775. J. E. M'Connell, Wolverhampton—Marine steam-engines and boilers.
1776. J. Mackay, Aigburth, near Liverpool—Propelling vessels.
1777. W. E. Newton, 66, Chancery-lane—Depositing metals.
1778. W. Wild, Salford—Machinery for covering rollers used in manufacture of cotton, &c., with leather, &c.

Dated 30th July.

1779. W. T. Henley, St. John-street Road—Protecting telegraph wires.
1780. G. K. Douglas, Chester—Permanent way.
1781. W. W. Cook, Bolton—Woven fabrics, and machinery for same.
1782. G. Ambles, Settle, West Riding, Yorkshire—Machinery for preparing for spinning cotton, &c.
1783. P. Ramsay, Glasgow—Construction of tents.
1785. P. A. L. C. de Fontainemoreau, 4, South-street, Finsbury—Mode of producing electric current. (A communication.)

Dated 1st August.

1786. J. Buchanan, Leamington Priors—Propelling.
1787. H. Cadell, Dalkeith—Reaping-machine.
1790. J. Gray, Rotherhithe—Consuming smoke.
1791. P. and F. Schäfer, Brewer-street, London—Travelling-bag.
1792. J. P. Tracy, Salisbury, and J. H. Tracy, Old-street, London—Cutting, reaping, and gathering machine.
1793. J. S. Ferring, Bury, Lancashire—Permanent way.
1795. A. R. Pope, Massachusetts—Electro-magnetic alarm apparatus.
1796. R. Griffiths, 69, Mornington-road, Regent's-park—Rivets and bolts.
1797. C. May, Great George-street, Westminster—Manufacture of bricks.
1798. R. Holme, Kingston-on-Hull—Gas.
1799. H. P. Vaile, Claydon Farm, Ashchurch, Tewkesbury—Reaping machinery.

Dated 2nd August.

1800. J. Bothams, Gravesend—Wheel-tyres for locomotives.
1802. W. Perks, jun., Birmingham—Tap for drawing off liquids.
1806. P. A. L. C. de Fontainemoreau, 4, South-street, Finsbury—Regulating electric light.

APPLICATION WITH COMPLETE SPECIFICATION FILED.

- C. F. Stansbury, Pall-mall—Machinery for tempering clay, and forming it into bricks. (A communication.)
3rd August, 1853.

WEEKLY LIST OF PATENTS SEALED.

Sealed 12th August, 1853.

378. Charles Hadley, of Lower Hurst-street, Birmingham—Improvements in the means of communication between the passengers, guard, and driver of a railway train, parts of which improvements are applicable to communicating on vessels.
382. Peter Armand le Comte de Fontainemoreau, of 4, South-street, Finsbury—Improvements in the mode of giving flexibility to beds, sofas, seats, and other similar articles. (A communication.)
385. Francis Clark Moutais, of 4, South-street, Finsbury—Invention of an improved mode of raising water.
387. William Clark, of 31, Chancery-lane—Improvements in the manufacture of colour and paints. (A communication.)
1504. William Hodgson and Henry Hodgson, of Bradford, York—Improvements in machinery for spinning wool, hair, silk, flax, and other fibrous substances.

Sealed 15th August.

393. George Stiff, of Brixton-hill, Surrey—Improvements in manufacturing paper.

Sealed 16th August.

413. James Murphy, of Newport, Monmouthshire—Improvements in the permanent way of railways.
426. William Darling, of Glasgow—Improvements in the manufacture of malleable iron, and other metals.
455. John Smith, of Uxbridge—Improvements in machinery for raising and forcing water and other fluids.
462. Adam Cyrus Eugert, of Mora-place, City-road—Improvements in joints for the sticks of parasols, and other like purposes. (A communication.)
514. John McAdams, Massachusetts, U. S.—Improvements in machinery or apparatus for printing on leaves of books their designations, numbers, or devices, or those of their pages, which machinery or apparatus may also be used to advantage for printing, designating numbers or devices on various other articles.
824. James Jerram Platt, of Long Eaton, Derby—Improvements in stockings.
1463. James William Gibson, of 120, Long Acre—Invention of a new method of pavement, tending to secure the evenness of the road and proper adhesion to the foot.
1465. Joseph Halsey, of Lisbon—Invention of improved telegraphic apparatus.
1497. Samuel Schofield, of Oldham—Improvements in machinery or apparatus for preparing and spinning cotton and other fibrous materials.
1551. Alfred Sandoz, of Ponts, Switzerland—Invention of an instrument or apparatus, which he terms a "solar watch." (A communication.)
1589. John-Jacques, junior, of Hatton-garden—Improvements in the manufacture of chess-boards and chess-men.

WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Date of Registration.	No. in the Register.	Title.	Proprietor's Name.	Address.
August 11	3498	Portable Reclining Chair	James Ross Murphy and Patrick Murphy, trading under the name or style of E. Ross	Dublin.